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# *Office of Inspector General*

# *Audit Report*

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## **FHWA HAS NOT FULLY IMPLEMENTED ALL MAP-21 BRIDGE PROVISIONS AND PRIOR OIG RECOMMENDATIONS**

*Federal Highway Administration*

*Report Number: MH-2014-089*

*Date Issued: August 21, 2014*





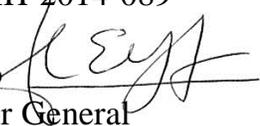
# Memorandum

U.S. Department of  
Transportation

Office of the Secretary  
of Transportation  
Office of Inspector General

Subject: **ACTION:** FHWA Has Not Fully Implemented  
All MAP-21 Bridge Provisions and Prior OIG  
Recommendations  
Federal Highway Administration  
Report Number MH-2014-089

Date: August 21, 2014

From: Thomas E. Yatsco   
Assistant Inspector General  
for Surface Transportation Audits

Reply to  
Attn. of: JA-30

To: Federal Highway Administrator

More than 600,000 highway bridges on the Nation's public roads carry, on average, over 4.6 billion vehicles per day. In 2013, over 147,000 of these bridges were deficient, carrying, on average, more than 1.2 billion vehicles per day.<sup>1</sup> The May 2013 collapse of a portion of the Interstate 5 Skagit River Bridge in Washington State brought renewed attention to the safety and conditions of U.S. bridges. The Federal Highway Administration (FHWA) is responsible for establishing and overseeing bridge safety requirements and administering Federal funds for highway bridges.

Since 2006, we have issued 3 reports with 16 recommendations for FHWA to improve oversight of States' bridge programs.<sup>2</sup> Our initial report in 2006 described States' errors in calculating bridge load ratings and in posting maximum weight limits and recommended that FHWA develop a data-driven, risk-based approach to bridge oversight. Subsequently, we reported that FHWA made limited progress in implementing this oversight approach and that it lacked sufficient data to

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<sup>1</sup> Deficient bridges are classified as either structurally deficient or functionally obsolete. While not necessarily considered unsafe, a structurally deficient bridge generally has major deterioration, cracks, or other deficiencies in structural components. These bridges typically require significant repair, and eventually rehabilitation or replacement. Functionally obsolete bridges may have inadequate lane widths, shoulder widths, vertical clearances, or other geometric deficiencies relative to their current usage.

<sup>2</sup> OIG Report Number MH-2006-043, "Audit of Oversight of Load Ratings and Postings on Structurally Deficient Bridges on the National Highway System," Mar. 21, 2006; OIG Report Number MH-2009-013, "National Bridge Inspection Program: Assessment of FHWA's Implementation of Data-Driven, Risk-Based Oversight," Jan. 12, 2009; and OIG Report Number MH-2010-039, "Assessment of FHWA Oversight of the Highway Bridge Program and the National Bridge Inspection Program," Jan. 14, 2010. OIG reports are available on our Web site: [www.oig.dot.gov](http://www.oig.dot.gov).

evaluate States' use of Highway Bridge Program (HBP) funds. We also reported that FHWA lacked the criteria and guidance for bridge engineers conducting annual reviews to assess States' compliance with bridge inspection standards under the National Bridge Inspection Program. Subsequent to our reports, in July 2012, the Moving Ahead for Progress in the 21st Century Act (MAP-21)<sup>3</sup> changed bridge safety requirements and funding uses and instituted new performance and accountability requirements for bridges on the National Highway System (NHS).

We conducted this audit at the request of the Ranking Member of the House Committee on Transportation and Infrastructure, who asked that we assess FHWA's efforts to improve bridge safety, including addressing our related recommendations and MAP-21 bridge safety provisions. Accordingly, we initiated two audits to address the Committee's request.<sup>4</sup> For this initial audit, our objectives were to assess FHWA's actions in response to (1) the bridge safety provisions in MAP-21 and (2) our prior bridge report recommendations. We conducted this performance audit in accordance with generally accepted Government auditing standards. Exhibit A details our scope and methodology.

## RESULTS IN BRIEF

FHWA identified 24 actions needed to implement MAP-21 bridge safety and funding provisions, including developing guidance, issuing rules on bridge safety and funding, and reporting to Congress. FHWA completed 12 actions, but the guidance FHWA issued to meet one of them is not sufficient because it does not fully explain funding eligibility for related bridge projects. Of the 12 actions still in progress, 2 MAP-21 rulemakings regarding asset management and performance management are behind schedule and may delay States' implementation of key performance and accountability requirements by at least a year later than specified in MAP-21. Additionally, FHWA has not finalized plans for issuing a Federal Register Notice on the prioritization process for bridges or fully determined the contents of a required report to Congress on national bridge and tunnel inventories. Finally, FHWA is completing an additional bridge safety-related action as directed by Congress after MAP-21's enactment to reevaluate requirements for signage of vertical bridge clearances.<sup>5</sup>

Of our 16 prior bridge-related recommendations, FHWA is working to address 4 open recommendations. Two of these focus on collecting bridge expenditure data and reporting on States' actions to improve the condition of their deficient bridges. FHWA plans to address our recommendations by providing more detailed

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<sup>3</sup> P.L. 112-141.

<sup>4</sup> We also initiated a separate audit that focuses on FHWA's bridge safety oversight activities. OIG Audit Announcement, "FHWA's Oversight of Bridge Safety," Nov. 5, 2013.

<sup>5</sup> The Joint Explanatory Statement (Division L, Title I) that accompanied the 2014 Consolidated Appropriations Act (P.L. 113-76).

information on funds obligated for bridges.<sup>6</sup> Before we can close these recommendations, we will evaluate how FHWA actually uses the obligation data to assess States' efforts to improve bridges and evaluate their use of funds for bridge projects. The other two recommendations focus on collecting more detailed condition data for all bridges on public roads so FHWA can better monitor nationwide bridge conditions and identify safety risks. However, FHWA plans to collect these data only for NHS bridges and complete a feasibility study for non-NHS bridges as required by MAP-21. Therefore, we will need to consider the results of the data collection and this study before we can close those recommendations. Of the recommendations FHWA addressed and we closed, one has resulted in decreased data errors in the National Bridge Inventory (NBI),<sup>7</sup> but not all errors were corrected in a timely manner since FHWA's guidance does not set clear requirements for timely resolution of errors.

We are making recommendations to enhance FHWA's planned actions to implement MAP-21 requirements and address our prior recommendations.

## **BACKGROUND**

FHWA establishes the standards for proper safety inspections of public highway bridges through the National Bridge Inspection Standards (NBIS).<sup>8</sup> States are responsible for ensuring that bridges within their jurisdictions are safe, and FHWA is responsible for overseeing States' efforts and providing technical expertise and guidance. Prior to MAP-21, Congress provided funding to the States for bridge replacement, rehabilitation, preventive maintenance, and inspections, through the Federal-aid bridge program. However in 2012, MAP-21 eliminated the existing dedicated funding program for bridges, the HBP, but it provided that bridge improvements be eligible for funding through two of the largest Federal-aid formula-based highway programs—the National Highway Performance Program (NHPP) and the Surface Transportation Program (STP). The NHPP was established by MAP-21 and provides funds to improve the condition and performance of bridges on the NHS, while the continuing STP provides flexible funding to preserve or improve bridges on any public road, including a set-aside for off-system bridges. Additionally, MAP-21 instituted new performance and accountability requirements for States to use in prioritizing NHPP spending; which include establishing performance targets for NHS bridge conditions and using bridge management systems. MAP-21 also instituted improvements to the NBIS,

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<sup>6</sup> Currently, FHWA's Fiscal Management Information System (FMIS) tracks Federal funding for State highway projects and not by each public highway bridge.

<sup>7</sup> The NBI is a database maintained by FHWA using data that States submit annually, including information on the location, age, ownership, condition, and load rating, and posting of the more than 600,000 public highway bridges nationwide.

<sup>8</sup> 23 C.F.R. Part 650, Subpart C.

such as requiring States to report element-level bridge inspection data for bridges on the NHS.

## **FHWA IS ADDRESSING MAP-21'S BRIDGE SAFETY PROVISIONS BUT HAS YET TO FULLY IMPLEMENT ALL REQUIREMENTS**

FHWA completed 12 of the 24 actions to implement MAP-21's bridge safety and funding provisions, but guidance for 1 completed action does not fully address the funding eligibility of all bridge-related activities. FHWA has efforts underway to address the 12 remaining actions. However, FHWA's planned actions on critical NHPP performance and accountability requirements are behind schedule. In addition, FHWA has not finalized plans for when to issue a Federal Register Notice or whether to include one inventory data element in a congressional report. Finally, FHWA is working on an additional bridge safety-related action requested by Congress after the enactment of MAP-21 to reevaluate requirements for signage of vertical bridge clearances. Table 1 summarizes FHWA's MAP-21 bridge-related actions. Exhibit B shows a more detailed status of all FHWA-identified MAP-21 actions.

***Table 1. Summary of FHWA's Bridge-Related Actions***

<b>Deliverable</b>	<b>Status of FHWA Bridge-Related Actions</b>
Rulemaking	<b><i>In Progress</i></b> - 4 actions to be addressed in the asset and performance management rules and the NBIS rule
Public Notice	<b><i>In Progress</i></b> - 1 notice to be published in the Federal Register <b><i>Completed</i></b> - 1 notice published in the Federal Register
Policy	<b><i>In Progress</i></b> - 1 policy update by FHWA's Office of Federal Lands Highway
Guidance	<b><i>Completed</i></b> - 10 actions addressed in issued guidance <b><i>In Progress</i></b> - 2 actions to be addressed in issued guidance
Reports	<b><i>In Progress</i></b> - 4 reports to Congress (includes 1 post-MAP-21 action)
Data Summary	<b><i>Completed</i></b> - 1 required data summary published on FHWA's Web site
Research	<b><i>In Progress</i></b> - Multiple research projects (counted as 1 research action)

See Exhibit B for more detailed information.

Note: One action was added by Congress after MAP-21's enactment.

### **FHWA Did Not Fully Address One Completed MAP-21 Bridge Funding Eligibility Action**

FHWA completed 12 of 24 actions to implement MAP-21 bridge safety and funding provisions. These completed actions include issuing guidance on the NHPP and the STP and providing a Web site summary of costs to replace structurally deficient bridges. However, one of the completed actions—FHWA's newly issued STP guidance—does not fully address new MAP-21 funding

eligibility provisions.<sup>9</sup> Specifically, the guidance does not consider that MAP-21's new National Bridge and Tunnel Inventory and Inspection Standards allow funds through the STP to be eligible to replace destroyed bridges, restore ferry boat service, and maintain historic bridges. As a result, States and local agencies that rely on this guidance when planning and budgeting for bridge projects may be unable to effectively assess which activities are eligible for Federal funding. FHWA agrees that a description of this funding should be provided in revised guidance.

### **FHWA Is Making Progress on Remaining MAP-21 Actions, but Critical Performance and Accountability Requirements Are Behind Schedule**

FHWA has 12 actions in progress to address MAP-21 bridge safety and funding provisions. These actions include issuing rulemakings, submitting reports to Congress, and providing guidance to the States. Of the 12 actions, the most significant are related to 2 rulemakings regarding MAP-21's performance and accountability requirements for NHS bridges. FHWA has already experienced some delays in developing the interdependent rulemakings to implement these requirements, and States may not implement the last of the rules' provisions until October 1, 2016—1 year later than specified in MAP-21. Tables 2 and 3 provide a timeline of FHWA's planned actions to implement these bridge-related performance and accountability requirements, which include (1) establishing State asset management plans and performance management targets, (2) reporting on progress and effectiveness of States' and Metropolitan Planning Organizations' (MPO)<sup>10</sup> investment strategies, and (3) implementing a funding penalty provision for States that do not meet the minimum standard for NHS bridge conditions.

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<sup>9</sup> MAP-21 Section 1111 (codified at 23 U.S.C. sec. 144(f) & (g)).

<sup>10</sup> An MPO is a policy board consisting of officials from State and local government and governmental transportation agencies that serve an urban or designated transportation management area.

**Table 2. FHWA’s Planned Action Dates To Implement MAP-21 Bridge-Related Performance Plans and Reporting Requirements**

Action Category	FHWA Planned Action Dates
<b>Asset Management Plans</b>	
Proposed Rule	October 24, 2014
Final Rule	No estimated date provided by FHWA (Required by April 1, 2014)
State Implementation (If final rule issued in fiscal year 2015)	October 1, 2016
<b>Performance Management</b>	
Proposed Rules (3)	March 11, 2014 – October 24, 2014 – December 5, 2014 (Required by April 1, 2014)
Final Rule “Effective Date”	April 1, 2015
State Target Establishment	April 1, 2016
<b>Progress Reporting</b>	
State Report to FHWA	October 1, 2016
MPO Performance Information	FHWA plans to use when available. (No statutory requirement for MPOs to report to FHWA)
FHWA Report to Congress	October 1, 2017

Source: OIG analysis

**Asset Management Plans and Performance Management.** Based on FHWA’s current schedule, States are to implement risk-based asset management plans by October 1, 2016—1 year after MAP-21 intended. These risk-based plans are a key component of MAP-21 and must include strategies for a program of projects to achieve State-established targets for NHS asset condition and performance. For States to effectively implement these plans, FHWA must complete two critical rules, but it is already behind schedule in meeting MAP-21’s deadlines:

- First, MAP-21 required FHWA to issue a final rule for asset management plans by April 1, 2014, and requires States to implement their plans at the start of the second fiscal year after the rule is issued (by October 1, 2015).<sup>11</sup> This rule must specify the requirements needed for States to develop compliant risk-based asset management plans, including bridges on the NHS.<sup>12</sup> FHWA currently plans to issue a Notice of Proposed Rulemaking (NPRM) on October 24, 2014, and has no planned date for issuing a final rule. Based on FHWA’s current

<sup>11</sup> MAP-21 Section 1106 (codified at 23 U.S.C. sec. 119(e)(5)).

<sup>12</sup> MAP-21 Section 1106 (codified at 23 U.S.C. sec. 119(e)(1)).

schedule for ending the public comment period in January 2015,<sup>13</sup> it will not be able to issue the final rule until sometime afterwards. This will allow States until the start of the second subsequent fiscal year, October 1, 2016, to implement their plans—a year later than MAP-21 intended.

- Second, MAP-21 required FHWA to initiate the rulemaking process by April 1, 2014, to develop national highway performance management measures.<sup>14</sup> Some of these measures are associated with NHS bridge conditions. States are to use these measures to establish performance targets in conjunction with their asset management plans. FHWA currently plans to issue three separate rulemakings to establish these performance measures (see insert)—making them all effective on April 1, 2015. MAP-21 would then allow States 1 year after this date to use these measures and develop their performance targets. FHWA has already missed the statutory rulemaking deadline and anticipates over an 8-month delay in issuing the third required NPRM. Additional delays are possible, as FHWA has stated that a typical rule takes up to 1 year to issue after the NPRM, and in this case, due to the compressed schedule, FHWA has allocated less than 4 months for developing the last of the final rules. Additionally, because of FHWA’s plans to synchronize the effective date of all three rules, difficulties in finalizing any of them could also delay the other rules.

**FHWA Performance Management Rules:**

**Rule 1** - Injuries and fatalities.  
(NPRM issued March 11, 2014.)

**Rule 2** - Interstate and non-interstate NHS pavement conditions and performance and **NHS bridge conditions**.  
(NPRM Planned October 24, 2014.)

**Rule 3** – Performance of the interstate and non-interstate NHS, traffic congestion, on-road mobile source emissions, and Interstate freight movement.  
(NPRM Planned December 5, 2014.)

**Progress Reporting.** MAP-21 requires States to report on their progress in meeting performance requirements and FHWA to report on the progress of States and MPOs. Current delays in issuing the asset management plan final rule and further delays in issuing the performance management rules may result in these progress reports either being issued late or only containing limited information.

- In the first biennial report, due October 1, 2016, MAP-21 requires States to report to FHWA on their progress in achieving their performance targets and on the effectiveness of their investment strategies.<sup>15</sup> However, under FHWA’s current schedule, States will not be required to establish their performance targets until April 1, 2016—only 6 months before they must report on their progress in achieving them. Additionally, due to the delay in the asset

<sup>13</sup> Report on the Department of Transportation’s Significant Rulemakings, July 2014.

<sup>14</sup> FHWA interpreted MAP-21’s requirement to promulgate a rulemaking to mean issuing a NPRM.

<sup>15</sup> MAP-21 Section 1203 (codified at 23 U.S.C. sec. 150(e)).

management plan rule, States will not be required to implement their plans for achieving those targets until the same date they are required to report their results to FHWA—rendering them unable to evaluate the effectiveness of their plans’ investment strategies. Because of MAP-21’s 2-year reporting requirement for this report, States may not be able or required to report completely to FHWA on their progress until October 1, 2018—2 years after MAP-21 intended.

- In the second report, due October 1, 2017,<sup>16</sup> MAP-21 requires FHWA to report to Congress on the effectiveness of (1) performance-based planning as a tool for guiding transportation investments overall and (2) performance-based planning processes of States and MPOs.<sup>17</sup> However, since the States’ initial reports to FHWA may be incomplete, the report to Congress may not contain required information regarding the effectiveness of MAP-21 performance initiatives. Additionally, while FHWA plans to use various sources of information to report on MPO performance, important MPO System Performance Reports may not be available to FHWA when needed since they are part of the MPO transportation plans, which are updated every 4 or 5 years. As a result, a lack of timely MPO performance information available to FHWA could likewise limit its capacity to present a complete and timely report to Congress.

**Funding Penalties for States With Structurally Deficient NHS Bridges.** MAP-21 established a minimum standard for the condition of NHS bridges tied to each State’s use of funds. As a result, each State must devote a portion of its NHPP funds to eligible NHS bridge projects if more than 10 percent of the total deck area of a State’s NHS bridges is on structurally deficient bridges for 3 consecutive years.<sup>18</sup> FHWA does not plan to enforce this requirement until October 1, 2016—4 years after MAP-21’s enactment. Table 3 on the following page provides a timeline of FHWA’s planned actions to implement the penalty provision.

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<sup>16</sup> MAP-21 Section 1201 (codified at 23 U.S.C. sec. 134(l)) and Section 1202 (codified at 23 U.S.C. sec.135(h)) require FHWA to submit the report 5 years after MAP-21’s enactment.

<sup>17</sup> MAP-21 Section 1201 (codified at 23 U.S.C. sec. 134(h)(2)(C)) requires MPOs to establish performance targets not later than 180 days after the relevant State establishes its targets.

<sup>18</sup> MAP-21 Section 1106 (codified at 23 U.S.C. sec. 119(f)(2)(A)).

**Table 3. FHWA’s Planned Action Dates To Implement MAP-21’s Bridge Funding Penalty Provision**

<b>NHPP Bridge Funding Penalty</b>	<b>FHWA Planned Action Dates</b>
NBI Data for Compliance Assessments Due	December 2014 - April 2015 - April 2016
Final Rule on Penalty Process	April 1, 2015
First Penalty Enforcement	October 1, 2016

Source: OIG analysis

FHWA officials stated that the delays in implementing this requirement are necessary because (1) it is part of a new program, so States need time to adjust their bridge programs accordingly before the penalty provision is applied, and (2) it would be inaccurate to apply the penalty criteria retroactively to bridge data collected prior to MAP-21 since it expanded the NHS—resulting in more bridges being classified as NHS bridges.

According to FHWA, its upcoming bridge performance management rule will establish funding penalty procedures. However, since that rule is not scheduled to become effective until April 1, 2015, enforcement of the penalty could be further delayed. According to FHWA, if comments received during the rulemaking process result in a change to current definitions such as that of structurally deficient bridges, States may be allowed an additional 2 years to report their NHS bridge data. This would also delay enforcement of the penalty—to fiscal year 2019, or 6 years after MAP-21’s enactment.

Until FHWA begins enforcing the penalty, there will be no consequences for States that do not achieve the minimum standards for NHS bridge conditions. To illustrate the potential impact of not having the enforcement actions in place in the year after MAP-21 was enacted, we analyzed NBI data from the 3 years prior to MAP-21’s enactment, which do not include the bridges added to the NHS by MAP-21. Our analysis shows that, if the penalty were in place, 10 States<sup>19</sup> and the District of Columbia may have been required to dedicate funds to improve their NHS bridges.

<sup>19</sup> California, Connecticut, Illinois, Indiana, Massachusetts, New York, Pennsylvania, Rhode Island, Washington, and Wyoming.

## **FHWA Has Not Finalized Plans for a Process To Prioritize Bridge Projects or Report Bridge Replacement Costs**

FHWA has not fully addressed MAP-21 actions related to prioritizing bridge projects and reporting of replacement costs for structurally deficient bridges. Specifically,

- FHWA has not set a target completion date to issue a Federal Register Notice describing the establishment of a risk-based bridge prioritization process<sup>20</sup> for collecting information that could help States evaluate potential bridge projects.
- FHWA has not determined if it will address the costs of replacing each structurally deficient bridge or the cost of rehabilitating each bridge in its required Bridge and Tunnel Inventory report to Congress. Determining the cost of replacing each structurally deficient bridge is one<sup>21</sup> of five MAP-21 bridge and tunnel inventory requirements for collecting and creating inventory information.<sup>22</sup> FHWA plans to report on the other four inventory requirements and did publish a summary of the replacement and rehabilitation costs on its Web site.<sup>23</sup> FHWA officials said they could add a link to the Web site in the report to Congress. However, this would not provide decision makers with an official record of costs—as a report to Congress would—because FHWA could update, change, or delete Web data at any time.

## **FHWA Is Working on a Bridge Safety Report Requested by Congress After MAP-21**

Subsequent to MAP-21, Congress directed in the Joint Explanatory Statement accompanying the Consolidated Appropriations Act of 2014 that FHWA complete an additional action related to bridge safety. FHWA was requested to reevaluate Federal and State requirements for marking bridge height, including standards related to the position and design of such signs and the enforcement of such standards, and report to Congress on the results of its review. FHWA is completing this review and plans to issue a draft report by September 30, 2014.

## **FHWA COMPLETED MOST PRIOR OIG BRIDGE RECOMMENDATIONS, BUT FOUR REMAIN OPEN**

Since 2006, we have issued 3 reports with 16 recommendations to improve FHWA's oversight of bridges. FHWA is addressing the four remaining open

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<sup>20</sup> MAP-21 Section 1111 (codified at 23 U.S.C. sec. 144(b)(3) & (4)).

<sup>21</sup> MAP-21 Section 1111 (codified at 23 U.S.C. sec. 144(d)(1)(B)).

<sup>22</sup> MAP-21 Section 1111 (codified at 23 U.S.C. sec. 144(b)(5)).

<sup>23</sup> FHWA's Web site summary of costs to replace or rehabilitate structurally deficient bridges can be found at: <http://www.fhwa.dot.gov/bridge/nbi/sd2012.cfm>

recommendations. Two of these recommendations address analyzing and reporting on bridge funding and the other two recommendations address collecting more detailed element-level<sup>24</sup> bridge condition data. FHWA completed actions addressing the other 12 recommendations—such as updating its guidance on data submissions to the NBI, which significantly reduced the number of NBI data errors detected by the Agency’s validation process. However, some NBI data errors are still not corrected in a timely manner. Table 4 summarizes the status of actions that we have recommended. Exhibit C provides a more detailed summary.

**Table 4. Summary of OIG Recommended Actions**

<b>Overall Actions</b>	<b>Status of Specific OIG Recommendations</b>
To analyze the expenditures of bridge funding and measure progress in improving the condition of deficient bridges.	<b>Open</b> – 2 recommendations to (1) Collect and analyze HBP expenditure data on a regular basis and (2) report regularly to internal and external stakeholders and evaluation of progress made in achieving performance targets.  <b>Closed</b> – 1 Recommendation
To define and enforce compliance with the NBIS.	<b>Closed</b> – 2 Recommendations
To develop and implement data-driven, risk-based oversight.	<b>Closed</b> – 5 Recommendations
To improve data quality in the NBI and collect more detailed bridge condition data.	<b>Open</b> – 2 Recommendations to increase FHWA’s use of element-level data by (1) incorporating AASHTO’s updated standards into the NBIS through the rulemaking process and (2) developing and implementing a plan to collect element-level data after AASHTO’s updated standards have been incorporated into the NBIS.  <b>Closed</b> – 2 Recommendations
To advance the use of effective bridge management systems.	<b>Closed</b> – 2 Recommendations

### **Efforts Are Underway To Address Two Open OIG Recommendations Related to Bridge Funding**

In 2010, we recommended that FHWA (1) collect and analyze HBP expenditure data to identify activities States took to improve the condition of deficient bridges and (2) report on the effectiveness of States’ efforts to improve bridges based on that analysis and provide an evaluation of progress made in achieving performance targets. We made the recommendations because FHWA’s FMIS lacked the detail necessary for its Headquarters bridge office to identify the amount of Federal-aid

<sup>24</sup> Element-level data provide detailed information that describes a bridge’s composition and condition, such as the type of material it is made of and the extent, nature, and severity of any deterioration.

funds States expended on structurally deficient bridges. This information is necessary to determine the extent that Federal funds result in improved bridge conditions.

Although these open recommendations pertain to the HBP, which MAP-21 abolished, other programs—primarily the NHPP and STP—provide States with significant funding that can be used for bridge projects. FHWA stated that it still plans to meet the intent of our prior recommendations and initially planned to collect States' Federal-aid bridge expenditure data as part of its FMIS modernization effort. FHWA later scaled back this effort and now plans to collect data on bridge-specific obligated funds rather than expenditures. FHWA expects to implement the modernized FMIS in fiscal year 2015.

While expenditure data provide the most relevant information on the use of Federal-aid bridge funds, FHWA's proposed use of obligation data could also yield useful information and help the Agency verify whether funding penalties for States that exceeded structurally deficient NHS bridge thresholds are applied appropriately. However, using obligation data has some limitations. Specifically, obligations for ongoing bridge projects are based on estimated project costs and do not reflect how much Federal funds have actually been spent on bridges to date or in a given year. Instead, obligation amounts represent the current Federal share of ongoing projects, which may change until the project is closed out and the data are complete—which can be several years after the project was initiated. Ideally, having both bridge expenditure and obligation data would be the most useful since it reflects both historical and prospective costs.

FHWA officials stated that they have not ruled out collecting expenditure data in future versions of FMIS. Without specific data on States' Federal-aid bridge expenditures, it may be difficult for FHWA to provide the information stakeholders need to assess whether Federal funds are being used effectively to improve structurally deficient bridges. Before we can close recommendations on bridge funding, we will need to review FHWA's use of obligation data to determine whether FHWA can identify the cost of bridge improvements and whether it can effectively use the data to report on the States' efforts to improve bridges and evaluate their use of funds for bridge projects. FHWA officials intend to include the results of their analysis in their biennial Conditions and Performance Report to Congress.<sup>25</sup>

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<sup>25</sup> This report provides decision makers with an objective appraisal of the physical conditions, operational performances, and financing mechanisms of highways, bridges, and transit systems.

## **FHWA Is Addressing Two Open OIG Recommendations To Collect More Detailed Bridge Condition Data**

In 2009, we recommended that FHWA increase the collection of element-level bridge data by (1) incorporating the American Association of State Highway and Transportation Officials' (AASHTO) updated standards into the NBIS to require the collection and submittal of element-level data and (2) implementing a plan to collect the data. Such data should allow FHWA to better monitor nationwide bridge conditions and identify safety risks.

While we recommended that FHWA require States to collect element-level data for all bridges, MAP-21 only requires that States collect these data for NHS bridges as each bridge is inspected, within 2 years after enactment. FHWA has issued a series of related guidance and is requiring States to start collecting element-level data for all NHS bridge inspections completed after October 1, 2014, and to be reported as part of subsequent NBI data submissions. Additionally, FHWA plans to incorporate the element-level data requirement into its update to the NBIS regulations required by MAP-21 to be completed by October 1, 2015.<sup>26</sup> MAP-21 also requires FHWA to conduct a feasibility study for collecting element-level bridge data for bridges not on the NHS. Accordingly, FHWA initiated this feasibility study and plans to complete it by September 2014.

In light of the ongoing efforts, FHWA officials requested that we close our 2009 recommendations. However, we will need to consider the results of the feasibility study and FHWA's planned changes and final rules to the NBIS before closing those recommendations. If the study concludes that it is feasible to collect element-level data for non-NHS bridges, then it would be prudent for FHWA to require States, through its NBIS rulemaking process, to collect element-level data for all bridges, as we recommended.<sup>27</sup>

## **FHWA Made Significant Progress Addressing OIG Recommendations To Resolve National Bridge Inventory Errors, but Vulnerabilities Persist**

FHWA addressed 12 of our 16 bridge recommendations, including implementing data-driven, risk-based oversight; improving NBI data quality; and advancing the use of bridge management systems. Among the completed actions was one for FHWA to promptly correct data errors identified by its automated NBI validation process.<sup>28</sup> FHWA is responsible for maintaining the NBI, which consists primarily of State-submitted data including the location, age, ownership, condition, load

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<sup>26</sup> The update to the NBIS, required by MAP-21 Section 1111 (codified at 23 U.S.C. sec. 144(h)(6)), will also address requirements related to complex structures, critical findings, and inspection intervals.

<sup>27</sup> MAP-21 does not prescribe any actions that FHWA must take once the study is completed.

<sup>28</sup> The validation process includes automated checks of NBI data items for missing information, potentially invalid entries, and inconsistencies. FHWA then coordinates with States to resolve the identified errors.

rating, and sign postings of the more than 600,000 public highway bridges nationwide. In response to our 2009 recommendation, FHWA implemented a process to notify States of data inaccuracies identified by its NBI validation process and to request corrections of those errors.

In 2009 FHWA addressed—and we closed—our recommendation based on FHWA’s improvement to its NBI validation process. Since that time, FHWA documented a 97-percent reduction in errors. However, our current review found that while errors have indeed decreased, they are not always corrected in a timely manner. Table 5 shows the number of errors that the NBI validation process found annually between 2008 and 2013 in the final NBI submissions.

**Table 5. Data Errors Found in States’ Final NBI Submissions Through FHWA’s Validation Process, From 2008 to 2013**

Year	Data Errors in States’ Final NBI Submissions
2008	139,471
2009	113,948
2010	20,004
2011	6,931
2012	5,092
2013	3,880

Source: FHWA

Based on a statistical sample of 100 of 5,726 NBI errors,<sup>29</sup> we determined that FHWA’s validation process identified 1,890 significant errors in States’ 2012 NBI data submissions.<sup>30</sup> Of these significant errors, we estimate that 88 percent were uncorrected by the end of 2012.<sup>31</sup> A third of these were from the previous year even though FHWA requires States to immediately resolve errors it deems significant. For all errors FHWA identified through its validation process in 2012, we estimate that 58 percent remained uncorrected at the end of 2012, and 17 percent were still uncorrected by the end of 2013.<sup>32</sup> This was because FHWA’s policy on NBI data submission and error resolution does not clearly define the Agency’s data quality expectations or its requirements for timely resolution of

<sup>29</sup> Our sample was selected from a universe of 5,726 NBI data errors FHWA had identified in States’ NBI submissions throughout 2012 and asked Division Offices and States to correct. FHWA’s error count of 5,092 in 2012 was based only on State’s final NBI submissions.

<sup>30</sup> FHWA defines significant errors as errors that impact on the deficiency status or the sufficiency rating calculation, which indicates whether a highway bridge has sufficiency to remain in service.

<sup>31</sup> Our estimate of 88 percent has a precision of +/-9.4 percentage points at the 90-percent confidence level.

<sup>32</sup> Our estimates of 58 and 17 percent have a precision of +/-8.1 and +/-6.2 percentage points respectively, both at the 90-percent confidence level.

errors.<sup>33</sup> NBI data are used to report on the condition of the Nation's bridges, enhance FHWA's oversight of bridge safety, and evaluate the impact of varied Federal investment levels. Any inaccuracies in the data may negatively impact FHWA's ability to exercise effective oversight and stewardship of Federal funds.

## **CONCLUSION**

FHWA is responsible for overseeing States' compliance with National Bridge Inspection Standards that are intended to ensure the safety of the Nation's roughly 600,000 highway bridges. Since 2006, FHWA has completed important actions to address our previous audit recommendations and new MAP-21 requirements. However, MAP-21 presents several significant challenges for FHWA in the coming years—especially its emphasis on performance and accountability. These MAP-21 requirements call for new rulemakings and guidance and a fundamental shift in how bridges—previously funded in large part by the Highway Bridge Program—will be managed.

## **RECOMMENDATIONS**

We recommend that the Federal Highway Administrator:

1. Update the STP guidance to address the funding eligibility of historic bridges and replacement of destroyed bridges and ferry boat service.
2. Establish a target date for completing the asset management plan final rule.
3. Establish a target date for FHWA to complete a Federal Register Notice describing the establishment of a risk-based bridge prioritization process.
4. Include a summary of the cost to replace structurally deficient bridges as part of FHWA's required bridge inventory report to Congress.
5. Update FHWA's NBI guidance to clarify the Agency's expectations for data quality and the process for ensuring that identified errors are resolved in a timely manner, including required timeframes for error resolution.

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<sup>33</sup> FHWA also recognizes that correction of some errors require physical verification and will not be resolved until the next inspection cycle, which typically occurs every 24 months.

## **AGENCY COMMENTS AND OFFICE OF INSPECTOR GENERAL RESPONSE**

We provided FHWA with our draft report on July 9, 2014. We received technical comments from FHWA on July 31, 2014, and incorporated them in our report as appropriate. We received FHWA's formal response on August 6, 2014, which is included in its entirety in the appendix to this report. In its response, FHWA stated that it concurred with recommendations 1 and 5, partially concurred with recommendation 2, and agreed to implement recommendations 3 and 4. However, FHWA did not provide specific information on all of its planned actions or completion dates as requested in our draft report. Subsequent to its response, FHWA provided additional details of its planned actions for recommendations 3 and 4, and we consider them resolved but open pending completion of the planned actions. Until FHWA provides further information on its actions and completion timeframes for recommendations 1, 2 and 5, we will consider these recommendations open and unresolved. Specifically:

For recommendations 1 and 5, FHWA stated it completed the actions recommended. However, our review of documentation provided by FHWA indicates that additional FHWA actions are needed to meet the intent of our recommendations; therefore we consider these recommendations open and unresolved. While FHWA updated its STP guidance to address recommendation 1, it did not update the corresponding STP fact sheet on its Web site, which should be consistent with related guidance and statute. Similarly, while FHWA issued new guidance for resolving NBI data errors to address recommendation 5, it is not fully consistent with its existing Standard Operating Procedure and Bridge Program Manual, which is necessary to establish clear expectations for data quality. Therefore, we request that FHWA update its STP fact sheet and either clarify how the new NBI guidance supersedes its existing related policy or update the related policy so that it is fully consistent.

For recommendation 2, FHWA did not describe its rationale for partial concurrence or provide a target action date for completing the asset management plan final rule, as we recommended. We consider this recommendation open and unresolved and request that FHWA provide us with this information.

**ACTIONS REQUIRED**

We consider recommendations 1, 2, and 5 open and unresolved and, in accordance with DOT Order 8000.1C, request that FHWA provide, within 30 days of this report, the additional information requested above. We consider recommendations 3 and 4 resolved but open pending completion.

We appreciate the courtesies and cooperation of FHWA representatives during this audit. If you have any questions concerning this report, please call me at (202) 366-5630 or David Pouliott, Program Director, at (202) 366-1844.

#

cc: DOT Audit Liaison (M-1)  
FHWA Audit Liaison (HAIM-13)

## **EXHIBIT A. SCOPE AND METHODOLOGY**

We conducted this performance audit from August 2013 through July 2014 in accordance with generally accepted Government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

To assess FHWA's actions taken or planned regarding MAP-21 implementation and OIG bridge recommendations, both open and closed, we interviewed FHWA Headquarters personnel and key stakeholders, such as AASHTO. Additionally, we reviewed FHWA documentation and assertions made and relied on the support of our expert engineer and legal counsel. We further reviewed FHWA data, NBI data, and information available through FHWA's Web site.

We selected a statistical sample of 100 of the 5,726 NBI data errors that FHWA had identified in States' NBI submissions for 2012. We tested whether these errors had, in fact, been corrected; when the sampled item was corrected; if the item was considered significant or not; and if it was present in the prior year or in the subsequent year. We also reviewed emails between FHWA Headquarters and Division Offices regarding error follow-up. Our sample design allowed us to estimate the percentage of errors that were still uncorrected with 90-percent confidence and a precision no greater than +/-9.4 percentage points.

## EXHIBIT B. FHWA'S PLANNED ACTIONS TO IMPLEMENT MAP-21 BRIDGE SAFETY AND FUNDING PROVISIONS – AS OF JULY 31, 2014

Number	MAP-21 Section/Title	Deliverable	Description of Deliverable	Action Date	Status
1	<b>Section 1104</b> National Highway System (NHS)	Guidance	Web site Questions and Answers and updated maps for the expanded National Highway System (NHS).	<b>Completed</b> 9/25/2012	FHWA issued Questions and Answers and updated NHS maps on its Web site.
2	<b>Section 1106</b> National Highway Performance Program (NHPP)	Guidance	Implement guidance for the NHPP.	<b>Completed</b> 10/1/2012 <b>Updated</b> 11/19/2012	FHWA initially issued guidance on its Web site and subsequently updated the guidance.
3		Final Rule	Implement State funding penalty regarding minimum standards for NHS bridge conditions.	<b>In Progress</b> NPRM 10/24/2014 FR 4/1/2015	FHWA issued Questions and Answers regarding the bridge funding penalty on 9/25/2012. FHWA plans to include penalty process rules as part of its second performance management rule planned to be effective on 4/1/2015.
4		Guidance	Web site Questions and Answers concerning eligibility of safety nets on bridges.	<b>Completed</b> 9/25/2012	FHWA issued Questions and Answers. (The guidance also applies to Section 1108 requirements.)
5		Guidance	Web site Questions and Answers concerning asset management.	<b>Completed</b> 9/25/2012	FHWA issued Questions and Answers on its Web site.
6		Final Rule	Regulation on State asset management plans.	<b>In Progress</b> NPRM 10/24/2014 FR No Date	FHWA's Final rule is behind schedule based on MAP-21's deadline for a final rule by 4/1/2014.

**Exhibit B. FHWA's Planned Actions To Implement MAP-21 Bridge Safety and Funding Provisions – as of July 31, 2014**

<b>Number</b>	<b>MAP-21 Section/Title</b>	<b>Deliverable</b>	<b>Description of Deliverable</b>	<b>Action Date</b>	<b>Status</b>
7	<b>Section 1108</b> Surface Transportation Program (STP)	Guidance	Implementing guidance for the STP.	<b>Completed</b> 10/1/2012 <b>Updated</b> 11/19/2012 and 7/21/2014	FHWA issued guidance and subsequently updated the guidance.
8		Guidance	Guidance for off-system bridge set-asides and waivers.	<b>Completed</b> 10/17/2012	FHWA issued guidance ahead of its 4/1/2014 schedule date.
9	<b>Section 1111</b> National Bridge and Tunnel Inventory and Inspection Standards	Federal Register Notice	Notice describing the establishment of a risk-based bridge prioritization process.	<b>In Progress</b> No date	FHWA is drafting a Notice.
10		Data Summary	Data summary of bridge replacement and rehabilitation costs for structurally deficient bridge preservation.	<b>Completed</b> 10/22/2013	FHWA posted data summary on their Web site.
11		Congressional Report	Report on bridge and tunnel inventory to Congress.	<b>In Progress</b> 11/30/2014	FHWA has drafted framework for the report and it is circulating for review and comments.
12		Guidance	Guidance for States to collect element-level data for NHS bridges.	<b>Completed</b> 12/16/2013	FHWA issued guidance memoranda on 4/16/2012, 3/12/2013, and 12/16/2013 ahead of its 10/1/2014 schedule date.
13		Congressional Report	Report on study of the feasibility of collecting element-level data for non-NHS bridges.	<b>In Progress</b> 9/30/2014	The study is ongoing.
14	Final Rule	Update and revise the National Bridge Inspection Standards	<b>In Progress</b> NPRM 12/1/2014 FR 10/1/2015	FHWA is working on issuing the required MAP-21 rule. (The statutory deadline for the final rule is 10/1/2015.)	

**Exhibit B. FHWA's Planned Actions To Implement MAP-21 Bridge Safety and Funding Provisions – as of July 31, 2014**

<b>Number</b>	<b>MAP-21 Section/Title</b>	<b>Deliverable</b>	<b>Description of Deliverable</b>	<b>Action Date</b>	<b>Status</b>
			(NBIS).		
15		Federal Register Notice	Notice to describe the FHWA's revised NBIS oversight process.	<b>Completed</b> 5/12/2014	FHWA issued a Notice on 5/12/2014.
16		Guidance	Web site Questions and Answers to describe the program changes to the National Bridge and Tunnel Inventory and Inspection Standards.	<b>Completed</b> 9/25/2012 <b>Updated</b> 10/9/2013	FHWA issued Questions and Answers and subsequently updated them.
17	<b>Section 1203</b> National Goals and Performance Management Measures	Guidance	Guidance to complete the biennial State performance report to FHWA.	<b>In Progress</b> 6/1/2015	FHWA has formed a team and developed a draft outline for the guidance.
18		Guidance	Guidance to States on setting targets to advance national goals.	<b>In Progress</b> 6/1/2015	FHWA has identified requirements and is developing a scope of work for guidance in support of proposed regulation.
19		Guidance	General implementation schedule of MAP-21 performance management elements.	<b>Completed</b> 7/2/2013	FHWA completed implementation schedule ahead of its 8/31/2013 schedule date.
20		Final Rule	Second performance management regulation—pavement and bridge performance measure.	<b>In Progress</b> NPRM 10/24/2014 FR 4/1/2015	FHWA's issuance of the NPRM is about 7 months behind statutory deadline of 4/1/2014. FHWA plans make the performance management rules effective on 4/1/2015.

**Exhibit B. FHWA's Planned Actions To Implement MAP-21 Bridge Safety and Funding Provisions – as of July 31, 2014**

<b>Number</b>	<b>MAP-21 Section/Title</b>	<b>Deliverable</b>	<b>Description of Deliverable</b>	<b>Action Date</b>	<b>Status</b>
21		Guidance	Q&As regarding the performance management requirements.	<b>Completed</b> 10/1/2012 <b>Updated</b> 7/15/2013	FHWA issued Questions and Answers and subsequently updated them.
22	<b>Section 1119</b> Federal Lands and Tribal Transportation Program	Policy	Policy change regarding asset management requirements for three agencies newly covered by FHWA's Office of Federal Lands Highway.	<b>In Progress</b> 9/30/2014	FHWA is working to update its policy.
23	<b>Section 32801</b> Comprehensive Truck Size and Weight Limits Study	Congressional Report	Report will include analysis of truck sizes and weights and the number of bridges that require postings.	<b>In Progress</b> 11/15/2014	FHWA has commenced work on preparing the required report. Technical analysis for the report is under way on assessing the impact of a change in Federal truck size and weight limits on bridges.
24	<b>Section 52003</b> Research and Technology Development and Deployment	Research and Development	Research related to bridges and bridge safety.	<b>In Progress</b> Various	FHWA has multiple ongoing research projects with various completion dates.
Other	<b>2014 Appropriations Act</b>	Congressional Report	Report will include evaluation of signage for vertical bridge clearances.	<b>In Progress</b> 1/17/2015	FHWA is in the process of completing the review and anticipates a draft report by September 30, 2014. (The statutory deadline for the report is 1/17/2015.)

Key: NPRM = Notice of Proposed Rulemaking.  
FR = Final Rule.

Source: OIG compilation of information provided and confirmed by the Federal Highway Administration.

**Exhibit B. FHWA's Planned Actions To Implement MAP-21 Bridge Safety and Funding Provisions – as of July 31, 2014**

## EXHIBIT C. FHWA'S ACTIONS TO ADDRESS OIG BRIDGE RECOMMENDATIONS – AS OF JULY 31, 2014

OIG Report	Number	Recommendation	Action Date	Status
MH-2006-043	A01	<p>Revise its annual compliance reviews of state bridge programs to address the most serious deficiencies found during bridge inspections. FHWA should, develop a risk-based, data-driven approach and metrics to focus on ensuring that states:</p> <p>a. Maintain up-to-date maximum weight limit records through state quality assurance/quality control programs that ensure current bridge conditions are accurately incorporated into load rating calculations.</p> <p>b. Post accurate maximum weight limit signs on bridges in a timely manner, when inspections indicate posting or revised posting should occur.</p> <p>c. Coordinate with other states to improve the accuracy and completeness of the Bridge Inventory and reporting of results to Congress. FHWA should focus on reducing discrepancies, including the most frequent deficiency identified in our statistical sample—the failure of information in the Bridge Inventory to match bridge load rating results in state databases.</p>	<p><b>Closed</b> 4/1/2009</p>	<p>FHWA developed several tools and resources to aid in its oversight of state bridge inspection programs that includes specific load rating and posting guidance and data-based reports to evaluate load rating and posting data.</p>

<b>OIG Report</b>	<b>Number</b>	<b>Recommendation</b>	<b>Action Date</b>	<b>Status</b>
MH-2006-043	A02	Evaluate greater use of computerized bridge management systems to improve states' bridge inspection programs and enhance the accuracy of bridge load ratings.	<b>Closed</b> 4/1/2009	FHWA completed an assessment of States' use of bridge management systems and called for continued research related to the use of bridge management at the national level.
MH-2009-013	A01	Develop and implement minimum requirements for data-driven, risk-based bridge oversight during bridge engineers' annual NBIS compliance reviews.	<b>Closed</b> 3/25/2011	FHWA initiated a new bridge safety oversight initiative that includes a revised process to assess States' compliance with the NBIS using 23 metrics.
MH-2009-013	A02	Develop a comprehensive plan to routinely conduct systematic, data-driven analysis to identify nationwide bridge safety risks, prioritize them, and target those higher priority risks for remediation in coordination with States. In implementing the plan, direct the Office of Bridge Technology to routinely and systematically identify and prioritize nationwide bridge safety risks.	<b>Closed</b> 3/25/2011	FHWA updated their program guidance and formed a dedicated team to assess nationwide bridge safety risks.
MH-2009-013	A03	Develop a comprehensive plan to routinely conduct systematic, data-driven analysis to identify nationwide bridge safety risks, prioritize them, and target those higher priority risks for remediation in coordination with States. In implementing the plan, direct the Division Offices to work with States to remediate higher priority nationwide bridge safety risks.	<b>Closed</b> 3/25/2011	FHWA initiated a new bridge safety oversight initiative that includes a revised process to address States' bridge safety risks.
MH-2009-013	A04	Develop a requirement for states to correct promptly data inaccuracies found by FHWA's NBI data validation program.	<b>Closed</b> 12/15/2009	FHWA introduced new error check procedures for the submittal, collecting, reviewing and assessment of NBI data.

**Exhibit C. FHWA's Actions To Address OIG Bridge Recommendations – as of July 31, 2014**

<b>OIG Report</b>	<b>Number</b>	<b>Recommendation</b>	<b>Action Date</b>	<b>Status</b>
MH-2009-013	A05	Increase FHWA's use of element-level data by coordinating with AASHTO to update the standards for element-level data.	<b>Closed</b> 3/25/2011	AASHTO published updated standards in their Guide Manual for Bridge Element Inspection.
MH-2009-013	A06	Increase FHWA's use of element-level data by incorporating AASHTO's updated standards into the NBIS through the rulemaking process.	<b>Open</b> Target Date 10/1/2015	FHWA's rulemaking process is ongoing. FHWA plans to publish the Notice of Proposed Rulemaking in December 2014.
MH-2009-013	A07	Increase FHWA's use of element-level data by: Developing and implementing a plan to collect element-level data after AASHTO's updated standards have been incorporated into the NBIS.	<b>Open</b> Target Date 12/31/14	FHWA plans to collect element-level data for NHS bridges starting in 2015 and, as directed by MAP-21, is studying the feasibility to include non-NHS bridges.
MH-2009-013	B01	Initiate a program to collect data regularly on States' use of Bridge Management Systems, evaluate the data to identify those States most in need of assistance in implementing effective Bridge Management Systems, and target them for technical assistance and training resources.	<b>Closed</b> 7/26/2011	FHWA established a process to periodically collect bridge management information and completed two surveys and targeted training.
MH-2010-039	A01	Collect and analyze HBP expenditure data on a regular basis to identify activities undertaken by states, such as bridge replacement and rehabilitation, to improve the condition of the Nation's deficient bridges.	<b>Open</b> Target Date 12/31/2014	FHWA is expanding the collection of project information and more comprehensive cost data within FMIS that can be linked to bridge condition data.
MH-2010-039	A02	Collaborate with States in setting quantifiable performance targets to measure progress in improving the condition of deficient bridges.	<b>Closed</b> 4/12/2012	FHWA and AASHTO collaborated on a National Cooperative Highway Research Program (NCHRP) project to develop guidance for implementing national level performance

**Exhibit C. FHWA's Actions To Address OIG Bridge Recommendations – as of July 31, 2014**

OIG Report	Number	Recommendation	Action Date	Status
				measurements. FHWA also completed a study on the use of performance management approaches and assessing infrastructure health.
MH-2010-039	A03	Report regularly to internal and external stakeholders on the effectiveness of states' efforts to improve the condition of the Nation's deficient bridges based on the analysis of HBP expenditure data and an evaluation of progress made in achieving performance targets.	<b>Open</b> Target Date 12/31/2014	FHWA plans to address this in the biennial Conditions and Performance report.
MH-2010-039	B01	Develop detailed criteria to help bridge engineers determine with greater consistency whether states demonstrate overall compliance with the NBIS.	<b>Closed</b> 3/25/2011	FHWA initiated a new bridge safety oversight initiative that includes a revised process to assess States' compliance with the NBIS using 23 metrics that includes standard definitions and thresholds for compliance.
MH-2010-039	B02	Develop a policy providing clear, comprehensive, risk-based guidance that defines procedures Division Offices should follow to enforce compliance with the NBIS.	<b>Closed</b> 3/25/2011	FHWA initiated a new bridge safety oversight initiative that includes a revised process to assess States' compliance with the NBIS using 23 metrics that includes a process for enforcing compliance.
MH-2010-039	B03	Conduct a workforce assessment so that FHWA can identify strategic needs and target limited funding to higher priority staffing and training needs in implementing data-driven, risk-based bridge oversight.	<b>Closed</b> 3/25/2011	FHWA completed a workforce assessment and hired new staff to provide technical assistance and support to the oversight of the NBIS.

**Exhibit C. FHWA's Actions To Address OIG Bridge Recommendations – as of July 31, 2014**

**EXHIBIT D. MAJOR CONTRIBUTORS TO THIS REPORT**

<b><u>Name</u></b>	<b><u>Title</u></b>
David Pouliott	Program Director
Stephen Gruner	Project Manager
Cynthia M. Auburn	Senior Analyst
John Hannon	Senior Analyst
Aron Wedekind	Engineer
Seth Kaufman	Senior Counsel
Petra Swartzlander	Statistician
Andrea Nossaman	Senior Writer-Editor
Christina Lee	Writer-Editor

## APPENDIX. AGENCY COMMENTS



U.S. Department of  
Transportation  
Office of the Secretary  
of Transportation

# Memorandum

Subject: **INFORMATION**: Management Comments to  
OIG Draft Report on MAP-21 Bridge Provisions  
and Prior Recommendations

Date: **AUG 05 2014**

From: Brodi Fontenot   
Assistant Secretary for Administration

Prepared By: Gregory G. Nadeau  
Acting Administrator  
Federal Highway Administration

To: Thomas E. Yatsco  
Assistant Inspector General for Surface Transportation Audits

Safety on our Nation's highways and bridges is the Federal Highway Administration's (FHWA) first and foremost priority. As a result of FHWA's oversight and coordination with its State and local partners, bridge conditions in the United States have consistently improved. Over the last decade, even as the total number of bridges in the Nation's inventory increased from 594,100 to 607,751, the percentage of bridges classified as structurally deficient<sup>1</sup> dropped from 13.5 percent in 2004 to 10.5 percent in 2013. Similarly, the percentage of the deck area on bridges classified as structurally deficient has dropped from 10.1 percent in 2004 to 7.7 percent in 2013. Additionally, through its National Bridge Inspection Program, FHWA has been overwhelmingly successful for more than 30 years in eliminating bridge structural safety-related failures from occurring.

- The OIG draft report recognized that FHWA worked expeditiously to effectively institute a more risk-based, data-driven approach to bridge oversight. The OIG has closed 12 of the 16 recommendations issued in its previous bridge reports.
- The Agency distributed nearly 30 guidance documents and 360 individual Q&As, mostly before October 1, 2012, when Moving Ahead for Progress in the 21st Century Act (MAP-21) took effect. In addition, FHWA provided 26 informational outreach sessions prior to that date, informing about 10,000 participants about the new requirements or programmatic changes in MAP-21.

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<sup>1</sup> Structural deficient classification is based on a number of National Bridge Inventory condition and appraisal ratings. See paragraph 9 at <http://www.fhwa.dot.gov/bridge/0650dsup.cfm>. "Structurally deficient" does not mean unsafe. Unsafe bridges are closed.

However, the OIG draft report does not reflect the extent of FHWA's actions regarding implementation of the MAP-21, including our extensive outreach with stakeholders.

- The FHWA's validation process to identify errors in the National Bridge Inventory (NBI), which contains State-submitted data, is robust and effective, resulting in a 97 percent error reduction. The remaining NBI data errors do not have an impact on bridge safety. While it will continue to work with the States to eliminate those remaining errors, the FHWA will also continue to focus and direct its limited resources on addressing the greatest bridge safety risks and priorities.
- Of the 24 bridge-related actions, the OIG draft report identified two rulemakings behind schedule. The delays involving these two rules are the result of the Agency managing several very complex interrelated rulemakings. The first proposed performance management rule generated over 11,000 sets of comments received from the public that need to be reviewed and considered in the development of the final rule.
- States have decades of experience in managing the condition of their pavements and bridges. Although rulemaking is necessary to build performance requirements into the Federal-aid Highway Program, any delays in the issuance of final rules do not hinder States from continuing to take steps to manage the condition of their highway assets.
- For performance management, MAP-21 established a deadline for issuing a notice of proposed rulemaking. It also provides time periods for States and Metropolitan Planning Organizations to implement requirements as a function of the effective dates of final rules, but it does not include specific dates for the final rule or the implementation requirements.
- While MAP-21 is a two year funding bill, which expires at the end of fiscal year 2014, it includes deadlines that go beyond its legislative timeframe – some deadlines as far out as 2017 and beyond. Many of FHWA's new responsibilities under MAP-21 will continue for years to come, and our efforts to date have built a strong foundation to help us carry out these responsibilities.

Based upon our review of the draft report, we concur with and have completed action on recommendations 1 and 5 on July 21 and June 5, 2014, respectively. We partially concur with recommendation 2 to ensure compliance with the Administrative Procedures Act. We agree to implement recommendations 3 and 4 and intend to complete action by January 31, 2015.

We appreciate this opportunity to offer additional perspective on the OIG draft report. Please contact Dr. Joseph Hartmann, Director of the FHWA Office of Bridges and Structures at (202) 366-4599 with any questions or if the OIG would like to obtain additional details about these comments.